Biotechnology

Learning objectives and graduate profile

Students of the Biotechnology study programme in the Master's degree will acquire adequate knowledge of the basic disciplines of natural sciences, especially biotechnology, biology and chemistry, as well as their border areas. Given that the programme fits into the field of study of Biotechnology, it is primarily concerned with subjects emphasising biotechnological aspects. In addition to classical chemical and biological subjects, an important part of the content of the study is the emphasis on biotechnological disciplines such as industrial biotechnology, pharmaceutical and medical biotechnology, nanobiotechnology, molecular biotechnology, as well as modern biological disciplines that are the basis for modern biotechnology, such as molecular biology techniques, instrumental methods of analysis, basic genomics, biofuels and products from renewable sources, novel and functional foods, etc. The curriculum also emphasises the connection to both ecological and environmental disciplines and subjects involving the issue of sustainable development in close connection with regional specificities. With a view to the broader applicability of the graduate in practice, the natural science and technology basis of the study is supplemented by selected legal, ethical and managerial disciplines. They acquire or improve their knowledge and practice in natural science English. They acquire habits for defining scientific hypotheses, preparing (experimental) projects to verify them, experimental design, defining outputs and their characterization, presentation, defense and implementation (also in practice).

Graduates of the Master's degree are able to investigate biomolecules and biological systems, as well as to use them in practice, they are able to independently manage individual operations related to their targeted use in the agro-food, pharmaceutical-medical and chemical-environmental field, as well as in the field of industrial use of renewable raw materials, have sufficient theoretical knowledge and practical experience necessary to carry out laboratory as well as production activities and to evaluate the data obtained and are able to communicate with an equivalent level of management, and also have knowledge of the economic, legal, ethical and environmental aspects of biotechnology, which enables them to apply themselves at the middle level of functional activities in the scientific-research, as well as in the production-business sphere. They are also prepared to further develop their knowledge and skills at the 3rd cycle of higher education.

Recommended study schedule

In case of interest, it is possible to view the profile subjects of the study programme and find out what knowledge, skills or competences the student will acquire after their successful completion, or view a detailed description of the study programme.

Requirements for applicants, method of selection and recommended personal qualities

Number of students admitted to the study programme: 30

Requirements for applicants and the method of their selection are specified in §56 to 58 of Act no. 131/2002 Coll. on Higher Education Institutions, they are regulated in more detail by the UCM Study Regulations in Trnava and the UCM Admission Procedure Regulations in Trnava. There is a fee for studying.

The admission procedure takes place without an entrance examination.

The admission to the selected study programme takes into account the fact whether the applicant has completed a study programme at the FNS UCM in Trnava or at another university of a related field of study. For admission to a master's study programme, the result of bachelor's studies is evaluated. In the case of applicants from other faculties and having completed a bachelor's degree in a related field, the composition of the courses taken in the first cycle of study is also evaluated. In the case of bachelor's studies in related fields, the FNS Admissions Committee may require entrance examinations. More information here.

Graduate employment and occupations that a graduate of the SP can pursue

Graduates of the Biotechnology study programme can seek employment in a wide range of workplaces with a biological and chemical focus in research teams, as well as in independent work with a research and technical focus (SAS, universities, health departments, agriculture and forestry, food industry, environment, etc.), as well as directly in production practice. They are prepared to meet the requirements of specialized institutions requiring field work, especially in workplaces dedicated to modern biotechnology, as well as environmentally oriented workplaces, and they will also find employment in institutions of state and local government. Graduates also have a wide range of applications in private companies and industrial enterprises with innovative-technological orientation in biotechnology, but also in related fields. Occupations in which graduates of the Biotechnology Master's degree programme can find employment are, for example, scientific researcher, laboratory diagnostician, laboratory technician in various departments (biochemistry, microbiology, etc.), product specialist, chemical production operator, raw material reception worker, fermenter/distiller, production technician, quality controller, specialist in research and development, technologist, agronomist, sanitation and hygiene specialist.

Teaching and learning rules

The rules of teaching are clearly defined in the information sheets of individual courses as well as in the UCM Study Regulations, which govern the FNS.

Assessment procedures and criteria

Lists of information sheets

Conditions for completing the study programme
The prerequisite for the award of the degree of MSc. degree is the acquisition of a minimum of 120 credits and passing the state examination.

Success rate
Without graduates

Further detailed information about the study programme is available at **vsk.ucm.sk** or on the department's website.

Person responsible for the quality of the study programme
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Persons responsible for profile subjects
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